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Conclusion

This response has addressed the restriction requirement.  
Allowance of the claims is requested.

Date: November 21, 2001

By:



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K. David Crockett, Esq.  
Reg. No. 34,311

Docket No. 212/262

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

In re Application of:

Mollenauer

Art Unit: 3763

Serial No.: 09/598,852

Filed: June 20, 2000

For: Devices and Methods for  
Repair of Valves in the Human  
Body

Examiner: Thahn, L

ATTACHMENT OF AMENDED CLAIMS AND SPECIFICATION PARAGRAPHS

The claims pending in this application, including any amendment presented in the accompanying RESPONSE TO OFFICE ACTION on November 21, 2001, are as follows:

1. (unchanged) A device for treating an incompetent anatomical valve or sphincter within the body of a patient, wherein said valve or sphincter controls flow of fluid through a vessel of the body and is supported by tissue of the vessel near the valve, said device comprising:

- a catheter body having a distal end and a proximal end, said distal end being adapted for insertion into the body;
- a first balloon located at the distal end of the catheter, said first balloon being inflatable to a diameter greater than the catheter body distal end, and a first inflation lumen communicating from the proximal end of the catheter body to the distal end of the catheter body;
- a heating element mounted on the distal end of the catheter, proximal to the first balloon;

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a suction lumen communicating from the proximal end of the catheter body to the distal end of the catheter body, and a suction port located on the distal end of the catheter communicating from suction lumen to the exterior of the catheter body, said suction port being located proximate the heating element; whereby suction applied to the vessel through the suction port will draw the tissue of the vessel near the valve toward the heating element.

2. (unchanged) The device of claim 1 further comprising:

a second balloon located at the distal end of the catheter, proximal to the first balloon, the heating element and suction port, said second balloon being inflatable to a diameter greater than the catheter body distal end.

3. (unchanged) The device of claim 2 further comprising:

a second inflation lumen communicating from the proximal end of the catheter body to the second balloon on the distal end of the catheter body.

4. (unchanged) The device of claim 1 further comprising:

a pair of wires running from the heating element to the proximal end of the catheter, said wires adapted to electrically connect the heating element to direct current power supply; and

wherein the heating element is a resistive heating element.

5. (unchanged) The device of claim 1 further comprising:

a wire running from the heating element to the proximal end of the catheter, said wire adapted to electrically connect the heating element to a radiofrequency power supply; and

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wherein the heating element is a radiofrequency electrode adapted for transmission of radiofrequency energy into the tissue of the vessel.

The specification paragraph on page 15, line 16 through page 16, line 5 presented in the Response submitted on November 21, 2001, is provided in marked-up form as follows:

Direct current, applied to the resistive heating elements, has been discussed as the preferred power source for applying thermal energy to the structures surrounding and supporting anatomical valves. Other power source may be used, such as alternating current and radiofrequency current (RF). RF power may be applied in bipolar mode or monopolar modes. For bipolar application, RF energy will flow from one electrode on the catheter to another, such as from electrode 66d and 66p shown in Figures 7 and 8. For monopolar RF application, a ground electrical on the surface of the patient's body must be provided, and RF energy will flow from each electrode 66d and 66p to the surface ground electrode. Various other sources of ablative or injurious power may be used, including lower frequency AC electrical power, ultrasound energy, radiation, cryosurgical devices and chemical ablating agents. [.,,adsfasdf] The energy is applied to damage or injure tissue in the body of the vessel that supports the valve which controls flow of fluids through the vessel. This tissue in the body of the vessel may be distal to the valve, proximal to the valve, or both. Preferably, the valve itself is not injured unless injury is indicated for additional treatment of the incompetence.

End